

REMARKS

Applicants request reconsideration and reexamination of this application. Currently, Claims 22-48 are pending. In an Office Action dated July 5, 2002, Claims 30-35 and 39-46 were withdrawn, and Claims 22-29, 36-38, 47, and 48 were rejected. This amendment amends Claims 22, 23, 25-33, 47, and 48; and adds new Claims 49-56.

Election/Restriction

In response to an election/restriction requirement dated December 1, 2001, applicants selected the embodiment of FIGURE 19 (which shows an exercise device having a guide to support reciprocating foot links and an elevation system for manually reorienting the guide). At least independent Claim 22 and dependent Claims 23-28 and 49-51 read on the embodiment of FIGURE 19. The remaining claims read on one or more of the embodiments of FIGURES 18-24.

Applicants believe at least independent Claim 22 to be generic to FIGURES 18-24. Should independent Claim 22 be found allowable, applicants assert that Claims 22-56 should be held allowable as well.

35 U.S.C. § 103

In the Office Action dated July 5, 2002, Claims 22-24, 27-30, 36-38, 47, and 48 were rejected as unpatentable over Miller ('829) in view of Breunig ('946). Remarks accompanying these rejections state that Miller discloses an elliptical exercise machine, but lacks a means for height adjustment of the guide 32 shown in Miller Figure 5. Further remarks assert that this aspect is taught by Breunig by mechanism 44 and linkage 46. Applicants respectfully disagree.

Independent Claims 22 and 48, as originally presented, recite an arrangement in which a foot supporting portion is connected to a frame in such a way as to allow the user's heel to initially rise at a faster rate than the user's toe, and when the second end of the foot link travels

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rearwardly from a foremost position, the user's heel initially lowers at a faster rate than the user's toe. Independent Claim 47 recites a foot support having a generally elliptical path of travel. These motions coincide with the natural movement and orientation of the user's feet during stepping motion.

Independent Claims 22, 47, and 48, as originally presented, also recite an elevation system. In these claims, the elevation system alters the inclination of the guide, thereby permitting a change in the nominal orientation of the heel section of the foot support *relative* to the toe section of the foot support. Claim 22 accomplishes this by using a manual elevation system to change the elevation or angular orientation of the guide relative to the floor. Claim 47 accomplishes this by using a manual elevation system to raise or lower either the first or second end of the frame. Claim 48 calls for a manual elevation system to change the elevation of the guide relative to the floor.

The above aspects are integral parts of the goal of the present invention as claimed in order to simulate the natural stepping motion of a user's foot. Because of the elevation system and its ability to alter the relative positions of the user's heel and toe portions, the claimed invention may be tailored to fit the needs of a particular user.

The Office Action of July 5, 2002, acknowledges that the Miller '829 patent does not disclose changing the elevation or angular orientation of the guide. Breunig likewise does not have the present invention in mind. In Breunig the four-bar link arrangement defined by frame side members 17, rear tracks 22, forward tracks 27 and the side members of bracket 43, are designed so that the rearward and forward tracks are always in parallel, regardless of their slope. This parallel relationship is needed to maintain chair 13 always in level orientation, for safety reasons and for proper operation of the device 10. Thus, Breunig is not concerned with proper orientation of a user's foot during stepping motion.

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Accordingly, applicants respectfully submit that Miller hypothetically combined with Breunig does not disclose or suggest the present invention. Moreover, for the foregoing reasons, applicants also respectfully submit that there is no suggestion in either Miller or Breunig that their disclosures should or could be combined to render Claims 22, 47, and 48 obvious. Thus, applicants respectfully request that the rejection of these claims be withdrawn. Claims 23-46 and 49-56 depend from Claim 22. Accordingly, these claims also should be found allowable as well.

Claim Changes

Applicants have herein made a number of changes to Claims 22, 23, 25 - 33, 47, and 48. The changes to Claims 22 and 48 are to correct nonsubstantive language errors by providing appropriate antecedent basis. Claims 23 and 25 - 29 are amended to improve the readability of these claims. Claims 30 - 33 and 47 are amended to improve the description of the relationships between elements. Applicants do not consider any of these amendments to be for purposes of patentability.

Double Patenting

Claims 22-24 and 27-48 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-38 of U.S. Patent No. 5,685,804. Claims 22-48 were similarly rejected over Claims 1-60 of U.S. Patent No. 6,146,313. Terminal disclaimers under 37 CFR § 1.321(c) are enclosed to overcome these rejections. U.S. Patent No. 5,685,804, U.S. Patent No. 6,146,313, and the present application are commonly owned.

Closing

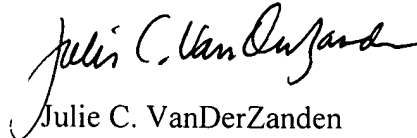
With the foregoing amendments and remarks, applicants assert that Claims 22-56 are in condition for allowance. Consequently, early and favorable action passing this application to

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issue is respectfully requested. If the Examiner has any questions or comments concerning this application, a telephone call to applicants' representative at the number listed below would be welcome.

Respectfully submitted,

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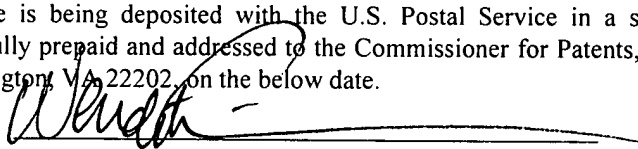
Terminal Disclaimer for U.S. Patent No. 5,685,804

Terminal Disclaimer for U.S. Patent No. 6,146,313

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Date: December 4, 2002



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VERSION WITH MARKINGS TO SHOW CHANGES MADE DECEMBER 4, 2002

In the Claims:

The claims have been amended as follows:

22. (Amended) An exercise device to simulate various types of stepping motions, comprising:

a frame having a pivot axis defined thereon, the frame configured to be supported on a floor;

a first and second foot link, each foot link including a first end and a second end; a foot supporting portion for receiving the user's feet, the foot [support] supporting portion supported by the first and second foot links;

a coupling system associated with the first end of each foot link for coupling the first end of each foot link to the pivot axis so that the first end of each foot link travels in a closed path relative to the pivot axis;

a guide associated with the frame and operative to engage and direct the second ends of the foot links along preselected reciprocating paths of travel at selected inclinations relative to the floor as the first ends of the respective foot links travel along their paths of travel, so that when the exercise device is in use and when the second end of one of the foot links travels forwardly from a rearmost position, [the] a heel portion of the user's foot initially rises at a faster rate than a toe portion thereof, and when the second end of the foot link travels rearwardly from a foremost position, the heel portion of the user's foot initially lowers at a faster rate than the toe portion; and

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an elevation system manually operable for selectively changing the inclination relative to the floor of the reciprocating paths of travel of the second ends of the first and second foot links, by selectively changing at least one of the elevation and angular orientation of the guide relative to the floor, thereby altering the nominal relative orientation of a heel supporting section of the foot supporting portion relative to [the] a toe supporting section of the foot supporting portion.

23. (Amended) The exercise device according to Claim 22, wherein the guide [comprises] includes a length substantially defining a path of travel [of] for the second ends of the first and second foot links.

25. (Amended) The exercise device according to Claim 24, wherein the elevation system [is comprised of] includes an outward extension that engages the guide at the second location, wherein the elevation system may be selectively coupled to the frame at a plurality of mounting locations spaced above the floor to alter the elevation of the outward extension and thus the angular orientation of the guide relative to the floor.

26. (Amended) The exercise device according to Claim 24, wherein the elevation system [comprises] includes an outward extension that is slidably coupled to the frame and which engages the guide at the second location, wherein the outward extension may be selectively slid and coupled to the frame at a plurality of locations to selectively alter the angular orientation of the guide relative to the floor.

27. (Amended) The exercise device according to Claim 23, wherein the guide [further comprises] includes a track defining the path of travel of the second ends of the first and second foot links, wherein the second ends of the first and second foot links [comprise] include an appendage that engages the track.

28. (Amended) The exercise device according to Claim 27, wherein the appendage [comprises] includes a roller that rollingly engages the track.

29. (Amended) The exercise device according to Claim 22, wherein the guide [is comprised of] includes a support operable to engage and support the first and second foot links at a location spaced from the first ends of the first and second foot links during reciprocating travel.

30. (Amended) The exercise device according to Claim 29, wherein the [support is comprised of] guide includes a roller [that engages and rollingly supports] connected to the support for engaging and rollingly supporting the first and second foot links during reciprocating travel.

31. (Amended) The exercise device according to Claim 29, wherein the [elevation system further comprises a strut having] guide has a first end pivotally coupled to the frame, wherein the support is coupled to the [strut] guide at a location spaced from the first end, wherein the elevation system is operable to adjust the elevation of the [strut] support relative to the floor by selectively pivoting the [strut] guide about [the] its first end.

32. (Amended) The exercise device according to Claim 31, [further comprising] wherein the elevation system includes an outward extension for supporting the [strut] guide at a [distance] location spaced from the first end of the guide, wherein the outward extension is manually positionable between at least a first location wherein the [strut] guide is supported at a first inclination and a second location wherein the [strut] guide is supported at a second inclination.

33. (Amended) The exercise device according to Claim 32, wherein the outward extension [comprises] includes a pin and the frame [further comprises] includes at least a first

aperture and a second aperture, wherein the pin is selectively engageable into the first aperture[, wherein the pin supports] to support the [strut] guide at the first inclination[,] and selectively engageable to the second aperture[, wherein the pin supports] to support the [strut] guide at the second inclination.

47. (Amended) An exercise device to simulate various types of stepping motions, comprising:

a frame having a first end and a second end configured to be supported on a floor;

first and second foot links, each foot link having a first end portion and a second end portion;

a foot support carried by the first and second foot links for receiving the feet of a user;

a coupling system associated with the first end of each foot link for coupling the first end of each foot link to the frame so that the first end of each foot link travels in a closed loop relative to the frame;

a guide system for supporting the second end portions of the foot links along a preselected reciprocating path of travel as the first ends of the respective foot links travel along their loops of travel, so that when the exercise device is in use, the foot support moves along a generally elliptical path of travel; and

an elevation system for manually raising and lowering [either] one of the first end [or] and the second end of the frame, thereby selectively increasing and decreasing the relative elevation of the first end of each foot link relative to the second end of each foot link [above the floor], thereby changing the path of travel of the foot support.

48. (Amended) An exercise device to simulate various types of stepping motions, comprising:

a frame having a pivot axis defined thereon, the frame configured to be supported on a floor;

a first and second foot link, each foot link including a first end and a second end; a foot supporting portion for receiving the user's feet, the foot supporting portion supported by the first and second foot links;

a coupling system associated with the first end of each foot link for coupling the first end of each foot link to the pivot axis so that the first end of each foot link travels in an arcuate path relative to the pivot axis;

a guide associated with the frame and operative to engage and direct the second ends of the foot links along preselected reciprocating paths of travel oriented at an average inclination relative to the floor as the first ends of the respective foot links travel along their paths of travel, so that when the exercise device is in use and when the second end of one of the foot links travels forwardly from a rearmost position, [the] a heel portion of the user's foot initially rises at a faster rate than a toe portion thereof, and when the second end of the foot link travels rearwardly from a foremost position, the heel portion of the user's foot initially lowers at a faster rate than the toe portion; and

an elevation system manually operable to selectively increase and decrease the average inclination relative to the floor of the preselected reciprocating paths of travel of the second ends of the foot links by changing the elevation of the guide relative to the floor.

New Claims 49-56 have been added.